UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,123	03/02/2004	Toshinori Tanaka	Q80167	1137

65565 7590 07/26/2007
SUGHRUE-265550
2100 PENNSYLVANIA AVE. NW
WASHINGTON, DC 20037-3213

EXAMINER	
VIDAYATHIL, TRESA V	
ART UNIT	**PAPER NUMBER**
3746	
MAIL DATE	**DELIVERY MODE**
07/26/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/790,123	TANAKA ET AL.	
	Examiner	Art Unit	
	Tresa V. Vidayathil	3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 May 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *3/2/04 and 5/16/07* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *5/16/07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 1 recites the limitation "the hand of the frame" in l. 25. There is insufficient antecedent basis for these limitations in the claim.

4. Claim 4 recites the limitation "the hand of the pump" in l. 24. There is insufficient antecedent basis for this limitation in the claim.

5. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The hand of the frame appears to be the base of the motor frame where the first clamp screw is screwed in (Fig. 3). The hand of the pump appears to be the base of pump housing where the third clamp screw is screwed in (Fig. 1). However, the specification (p. 5, ll. 12-13) and amended claim 1 (last two lines) indicate that the first clamp screw and the second clamp screw are tightened from the hand of the frame. The second clamp screw doesn't appear to touch the frame or what one might consider the hand of the frame. Therefore, it is not clear what the applicant considers to be the hand of the frame, and consequently, what is considered the hand of the pump is also unclear.

Claim Rejections - 35 USC § 103

6. Claims 1-2, 4, 6-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duff 5,868,175 in view of Hamasaki EP 0987 439 A2 in view of Cametti 2,887,062 in view of Carey 6,020,667 and further in view of Sugino 5,590,732.

Duff discloses: first housing (59 and 71) having a support portion (Fig. 4 – between control package 40 and motor 39), second housing 72 fixed to the first housing (59 and 71), control device 40 disposed in a space surrounded by a side of the first housing (59 and 71) and a side of the second housing 72 (Fig. 4), motor 39 disposed on another side of the first housing (59 and 71) (Fig. 4), motor 39 includes a rotor 66, a stator 63, and frame (61 and 58), rotor 66 having a first bearing (Fig. 4 – between control package 40 and motor 39; Also see col. 3, ll. 59-60) supported by the support portion (Fig. 4 – between control package 40 and motor 39) and a second bearing 57, frame (61 and 58) making up an outer shell of motor 39 and having a receiving portion (Fig. 4 – between pump and motor) which receives the second bearing 57, and control device 40 and motor 39 and pump 38 are integrated (col. 3, ll. 40-43 and ll. 58-59, and col. 4, ll. 24-26).

However, Duff does not disclose the following limitations that are taught by Hamasaki: pump 1 disposed on the other side of the second housing (top half of 2), first screw 31 for securing the frame (Fig. 7 –housing of motor 3) to the first housing (bottom half of 2), and a second screw 31 for securing the first housing (bottom half of 2) and the second housing (top half of 2), first screw 31 and second screw 31 are

tightened from the hand of the frame (Fig. 7 – housing of motor 3), second housing (top half of 2) has threaded portions (Fig. 7), first screw 31 includes a plurality of first screws 31 (col. 15, l. 56 to col. 16, l. 5), part of the plurality of first screws 31 are tightened to the first housing and the remainder are tightened to the threaded portions (col. 15, l. 56 to col. 16, l. 5 and Fig. 7), second housing (top half of 2) has a threaded portion (col. 15, l. 56 to col. 16, l. 5 and Fig. 7) to which the first screw 31 is screwed, two of the six first screws 31 are tightened to the first housing (bottom half of 2) and the remaining four screws 31 are tightened to the threaded portions (col. 15, l. 56 to col. 16, l. 5 and Fig. 7), pump 1 has a pump housing (5, 50,and 17) fixed by tightening a third screw 52 (col. 15, ll. 40-49) to the threaded portion (Fig. 7) from the hand of the pump (50 and 17), and at least one of the abutment face between the first housing (bottom half of 2) and the second housing (top half of 2) and the abutment face between the first housing (bottom half of 2) and the frame (Fig. 7 – housing of motor 3) has an outer circumference on which a step portion (Fig. 7 – groove provided on top side of bottom half of 2) is provided, both the first screw 31 and the second screw 31 are accessible from outside of the first housing (bottom half of 2) and the second housing (top half of 2) (Fig. 7), third screw 52 is accessible from outside of the second housing (top half of 2) and is screwed into the second housing (top half of 2) in a direction towards the motor 3, pump 1 is disposed distal to the motor 3, first screw 31 is screwed into the frame (Fig. 7 – housing of motor 3) and the first housing (bottom half of 2) in the same axial direction that the second screw 31 is screwed into the first housing (bottom half of 2) and the second housing (top half of 2) (Fig. 7 and para. 71).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Duff in view of the above teaching of Hamasaki in order to provide support for the pump (col. 3, ll. 45-46), to simplify assembly (col. 3, 45-47), to secure and align the motor and housings together (col. 15, l. 40 to col. 16, l. 5), to provide an O-ring groove for sealing purposes (Fig. 7), and to make the device more compact for car-mount use (p. 3, ll. 26-41).

Regarding the limitation that a clamp screw is utilized, any equivalent screw able to fasten two elements together can be used because they perform the same function in the same manner. See MPEP § 2144.06. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Duff in view of Hamasaki with an equivalent screw in order to secure and align the motor and housings together (Hamasaki, col. 15, l. 56 to col. 16, l. 5).

Regarding the limitation that a step portion is provided with a chamfer, change of shape fails to patentably distinguish this invention over the prior art (See MPEP § 2144.IV.B). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify Duff in view of Hamasaki to change the shape of the step to a step with an additional indentation or chamfer.

Regarding the limitation that the second clamp screw is disposed further from the motor than the first clamp screw, rearrangement of parts fails to patentably distinguish this invention over the prior art (See MPEP § 2144.04.VI.C). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to rearrange

the screws closer or further apart from each other in order provide the necessary sealing support.

However, Duff in view of Hamasaki does not disclose a stator having an iron core (Cametti, col. 2, ll. 70-72) as taught by Cametti. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to have modified Duff in view of Hamasaki with a stator having an iron core in order to provide a stator made of a magnetic material (Cametti, col. 2, ll. 70-72).

However, Duff in view of Hamasaki and further in view of Cametti does not disclose a frame 104 including an inner circumferential face into which the stator core 128 is press fitted (Carey, col. 1, ll. 34-36) that is taught by Carey. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to have modified Duff in view of Hamasaki and further in view of Cametti with a stator core press-fit into a motor housing in order to achieve a bond between the stator and housing shell (Carey, col. 1, ll. 34-36).

However, Duff in view of Hamasaki in view of Cametti and further in view of Carey does not disclose a frame 1a made of iron (col. 4, ll. 12-15) that is taught by Sugino. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to have modified Duff in view of Hamasaki in view of Cametti and further in view of Carey with an iron frame in order to assemble a power steering apparatus with ease (Sugino, col. 1, ll. 59-61).

7. Claim 3 rejected under 35 U.S.C. 103(a) as being unpatentable over Duff 5,868,175 in view of Hamasaki EP 0987 439 A2 in view of Cametti 2,887,062 in view of Carey 6,020,667 and further in view of Sugino 5,590,732

As shown above, Duff in view of Hamasaki in view of Cametti in view of Carey and further in view of Sugino discloses all of the limitations substantially as claimed.

Regarding the limitation that the plurality of first clamp screws includes six first clamp screws disposed at substantially regular intervals, duplication of parts and rearrangement of parts fails to patentably distinguish this invention over the prior art (See MPEP § 2144.VI.B-C). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use six first clamp screws disposed at substantially regular intervals in order to secure and align the motor and housing with a circumference of screws (Hamasaki, col. 15, l. 56 to col. 16, l. 5).

8. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Duff 5,868,175 in view of Hamasaki EP 0987 439 A2 in view of Cametti 2,887,062 in view of Carey 6,020,667 in view of Sugino 5,590,732 and further in view of Knife 4,324,532.

Duff in view of Hamasaki in view of Cametti in view of Carey and further in view of Sugino discloses all of the limitations substantially as claimed except for the following taught by Knife: sealant is coated on an abutment face between first housing 20 and second housing 13 and an abutment face between the first housing 20 and the frame 22 (col. 4, ll. 1-19). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Duff in view of Hamasaki in view of Cametti in view

of Carey and further in view of Sugino with sealant on abutting housing surfaces in order to retain the housing sections together (Knife, col. 4, ll. 9-19).

Response to Amendment

9. The reply filed on May 16, 2007 is not fully responsive to the prior Office Action because of the following omission(s) or matter(s): 35 U.S.C. 112, para. two rejections 5(e) and 6 were not addressed. See 37 CFR 1.111.

10. Amendments to the drawings and specification have been received, and due to these amendments, the Examiner withdraws the prior objections to the drawings and specification.

11. The Examiner acknowledges the amendment of claims 1-7 and the addition of claims 8-12.

12. Due to the amendments made to the claims, 35 U.S.C. 112, para. two rejections 5(a) through 5(d) have been withdrawn by the Examiner.

Response to Arguments

13. Applicant's arguments filed May 16, 2007 regarding the 35 U.S.C. 103 rejections have been fully considered, but they are not persuasive. Therefore, the original 35 U.S.C. 103 rejections of claims 1-7 are not withdrawn, but they have been amended to align with the claim amendments and additional issues provided by the Examiner.

14. The applicant argues that the pump in Duff and the pump in Hamasaki are designed differently because they have different intended purposes. The applicant

specifically points to the reservoir R in Hamasaki that is not present or required in Duff. The applicant then argues three of the motivations to combine presented by the Examiner in the previous Office Action. The primary argument being that there is no motivation to combine because Duff is not deficient with respect to the features taught by Hamasaki nor does Duff require the features provided by Hamasaki in order to work. The applicant also states that pump as combined would not function without massive structural changes.

These arguments are not persuasive because the test for obviousness does not require every feature in one reference to be present in another reference. Nor does the test require that the inventions in the references as a whole to have the same intended purpose. The test does not require a deficiency, expressly stated or implied, in any one of the combined references. In addition, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). The examiner also recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5

USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tresa V. Vidayathil whose telephone number is (571) 272-3436. The examiner can normally be reached on 9AM - 5:30PM, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Stashick can be reached on (571) 272-4561. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Anthony Stashick
Supervisory Primary Examiner
Art Unit 3746

TVV